

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/IT2006/000049

## A. CLASSIFICATION OF SUBJECT MATTER

INV. C07D409/12 A61K31/473 A61K31/517 A61P25/28

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C07D A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, EMBASE, BIOSIS, BEILSTEIN Data, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ROSINI, M. ET AL.: "Rational Approach To Discover Multipotent Anti-Alzheimer Drugs" JOURNAL OF MEDICINAL CHEMISTRY, vol. 48, 31 December 2004 (2004-12-31), pages 360-363, XP002387801 the whole document	1-44
X	WO 00/50391 A (MERCK & CO., INC; BRISTOL-MYERS SQUIBB COMPANY; SMITH, DAVID, W; MUNOZ) 31 August 2000 (2000-08-31) Claims 1-26; compounds 653, 712, 848, 857, 943	1-44
X	EP 0 527 687 A (ADIR ET COMPAGNIE) 17 February 1993 (1993-02-17) Claims 1-23; Formula (I); examples 25 and 43	1-44
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Further documents are listed in the continuation of Box C.



See patent family annex.

## \* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

29 June 2006

Date of mailing of the international search report

19/07/2006

Name and mailing address of the ISA/

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International application No

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X	WO 00/59899 A (SOCIETE DE CONSEIL DE RECHERCHES ET D'APPLICATIONS SCIENTIFIQUES ; HAR) 12 October 2000 (2000-10-12) Claims 1-14; Formula (Ia); examples 2-6 and intermediates	1-44
X	WO 01/25226 A (BETHESDA PHARMACEUTICALS, INC; PERSHADSINGH, HARRIHAR, A; AVERY, MITCH) 12 April 2001 (2001-04-12) Claims 1-4, 6-9, 16-20, 24-26, 28, 30-32, 34, 36-38, 40-41; Formulae (A), (I), (II) and (IV); Compound 32	1-44
X	WO 00/53601 A (THE UNIVERSITY OF MISSISSIPPI; PERSHADSINGH, HARRIHAR, A; AVERY, MITCH) 14 September 2000 (2000-09-14) Claims 1-5, 8, 10, 12, 14-16, 19, 26-29, 31-33, 35; Formulae (I) and (II); compounds 12, 39, 76-77, 86, 88; examples 2-3, 5; Table IV; Fig. 15, 2nd compound	1-44
X	WO 02/076177 A (BETHESDA PHARMACEUTICALS, INC; PERSHADSINGH, HARRIHAR, AJODHYA; AVERY,) 3 October 2002 (2002-10-03) Claims 1- 7; Formula 1; Scheme 3, compounds 17-18, 20; Scheme 4, compounds 25-26; Scheme 5, compounds 30-31; Scheme 11, compounds 55-56; Table III	1-44
X	EP 0 869 126 A (SANKYO COMPANY LIMITED) 7 October 1998 (1998-10-07) Claims 1-29; Formula (I); compounds 1-75, 1-76, 1-79, 1-80, 1-158, 1-159, 1-162, 1-163, 1-1375, 1-1376, 1-1379, 1-1380, 1-1458, 1-1459, 1-1462, 1-1463, 1-2549, 1-2550, 1-2553, 1-2554; p. 344, l. 18-39	1-44
X	STARK, H. ET AL.: "Search for novel leads for histamine H-3-receptor antagonists: amine derivatives" PHARMAZIE, vol. 52, no. 6, 1997, pages 419-423, XP001246875 Intermediate compound in the synthesis of 7, see 3.1.3.	1
X	HARNETT, J.J., ET AL.: "Novel Lipoic Acid Analogues that Inhibit Nitric Oxides Synthase" BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, vol. 12, 2002, pages 1439-1442, XP002387802 Compounds 1c, 1e, 5c, 5e, 6c, 6e	1-4, 38, 42, 44
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International application No

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X	STARK H ET AL: "New potent H3-receptor antagonists of the amide type" EUROPEAN JOURNAL OF PHARMACEUTICAL SCIENCES, ELSEVIER, AMSTERDAM, NL, vol. 3, 1995, pages 95-104, XP002196519 ISSN: 0928-0987 Compounds 16-18, 20	1, 38, 42, 44
X	LUO, J. ET AL.: "Ruthenium Tetraamine Chemistry of Self-Assembled Monolayers on Gold Surfaces: Substitution and Reactivity at the Monolayer Interface" LANGMUIR, vol. 14, 1998, pages 3602-3606, XP002387803 Scheme 1, method 1	1-4, 44
X	GARDENT J: "On some dihydro-and tetrahydroisoquinolines substituted in the 1 position with cyclane or cyclene groups. 1. Chemical study." ANNALES PHARMACEUTIQUES FRANÇAISES. JUN 1960, vol. 18, June 1960 (1960-06), pages 381-393, XP009068531 ISSN: 0003-4509 Compound 1e	1, 44
X	SCHWEIZER ET AL: "Sulfonyliminoimidazolines. A new class of Oral Hypoglycemic Agents. 1.1-[[p-[2-(Acylamino)ethyl]phenyl]sulfonyl]-2-iminoimidazolidines" JOURNAL OF MEDICINAL CHEMISTRY, AMERICAN CHEMICAL SOCIETY. WASHINGTON, US, vol. 26, 1983, pages 964-970, XP002161007 ISSN: 0022-2623 Compound 41	1, 38, 42, 44
X	SHEPARD, E.R. ET AL.: "PAPAVERINE ANALOGS. IV. 1-CYCLOALIPHATIC-6,7-DIMETHOXYISOQUINOLINE S" JOURNAL OF ORGANIC CHEMISTRY, vol. 19, 1954, pages 415-417, XP002387804 p. 417, l. 39-44	1, 3, 44
X	US 3 406 199 A (WEBER HELMUT ET AL) 15 October 1968 (1968-10-15) Claim 1; Formula (I); example 12, col. 9, l. 19-24	1, 3, 38, 42, 44
X	EP 1 500 650 A (ISHIHARA SANGYO KAISHA, LTD) 26 January 2005 (2005-01-26) Claims 1-6; Formula (I); Compound I-165	1, 44
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## INTERNATIONAL SEARCH REPORT

International application No

PCT/IT2006/000049

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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 03/053366 A (OSI PHARMACEUTICALS, INC; CASTELHANO, ARLINDO; MCKIBBEN, BRYAN; STEINI) 3 July 2003 (2003-07-03) Claims 1-19; Formula (I); p. 110, l. 31-32; p. 117, l. 24-25; p. 122, l. 26-27; p. 127, l. 40-41 -----	1, 2, 38, 42, 44
X	WO 93/14070 A (INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE M; SOCIETE CIVILE BIO) 22 July 1993 (1993-07-22) Claims 1-4, 8-31; Formula (I); compounds 4, 17-18 -----	1, 38, 42, 44
X	WO 00/76505 A (3M INNOVATIVE PROPERTIES COMPANY) 21 December 2000 (2000-12-21) Claims 1-46; Formula (I); Compounds 83, 99 -----	1, 38, 42, 44
X	RU 2 039 733 C1 (VSEROSSIJSKI NAUCHNYJ TSENTR PO BEZOPASNOSTI BIOLOGICHESKI AKTIVNYKH) 20 July 1995 (1995-07-20) Markush formula; compounds 6, 14 -----	1, 38, 42, 44
X	WO 2004/052862 A (ONO PHARMACEUTICAL CO., LTD; HABASHITA, HIROMU; KOKUBO, MASAYA; SHIBAY) 24 June 2004 (2004-06-24) abstract -----	1, 3, 38, 42, 44
P, X	-& EP 1 571 146 A (ONO PHARMACEUTICAL CO., LTD) 7 September 2005 (2005-09-07) claims 1-16; Formula (I); example 11-0156 -----	1, 3, 38, 42, 44
X	WO 99/29693 A (MINNESOTA MINING AND MANUFACTURING COMPANY) 17 June 1999 (1999-06-17) Claims 1-16; Formulae (I)-(II); examples 124, 138, 160, 175 -----	1, 38, 42, 44
P, X	GURKAN A SELEN ET AL: "Syntheses of novel indole lipoic acid derivatives and their antioxidant effects on lipid peroxidation." ARCHIV DER PHARMAZIE. MAR 2005, vol. 338, no. 2-3, March 2005 (2005-03), pages 67-73, XP002387805 ISSN: 0365-6233 Compounds III-5(a-b) -----	1-4, 38, 42, 44
P, X	WO 2005/123079 A (3M INNOVATIVE PROPERTIES COMPANY; KSHIRSAGAR, TUSHAR A.; LUNDQUIST, G) 29 December 2005 (2005-12-29) Claims 1-33 37-39; Formulae (I)-(VIII), (X)-(XVIII); example 73 -----	1, 38, 42, 44
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## INTERNATIONAL SEARCH REPORT

International application No  
PCT/IT2006/000049

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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 2005/048945 A (3M INNOVATIVE PROPERTIES COMPANY; KSHIRSAGAR, TUSHAR, A; LUNDQUIST, GR) 2 June 2005 (2005-06-02) Claims 1-43; Formula (I); example 62	1,38,42, 44
P,X	WO 2005/048933 A (3M INNOVATIVE PROPERTIES COMPANY; KSHIRSAGAR, TUSHAR, A; LUNDQUIST, GR) 2 June 2005 (2005-06-02) Claims 1-35; Formula (I); example 49	1,38,42, 44
E	WO 2006/029115 A (3M INNOVATIVE PROPERTIES COMPANY; KSHIRSAGAR, TUSHAR A.; LANGER, SCOT) 16 March 2006 (2006-03-16) Claims 1-51; Formula (I); example 62	1,38,42, 44

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IT2006/000049

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
Although claim 43 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compounds/compositions.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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